

# The Times and Register.

VOL. XXX. No. 21.

PHILADELPHIA, NOVEMBER 23, 1895.

WHOLE No. 898.

## Original.

### SUBCUTANEOUS INJECTIONS OF ARISTOL IN THE TREAT- MENT OF TUBERCULO- SIS.

BY DR. S. S. GRUSDIEFF, OF ST.  
PETERSBURG.

Translated for the "Times and Register"  
from *Therapeutische Wochenschrift*,  
September 1, 1895.

Aristol, which was first prepared in 1890, by Messinger and Wortmann, was introduced into therapeutics in the same year by Eichhoff. This author experimented with it in a large number of diseases of the skin, and especially in parasitic affections, deriving excellent results from the remedy, which he ascribed partly to the liberation of free iodine and partly to the thymol contained in aristol.(1)

Nadaud was the first to employ aristol in tuberculosis. At a meeting of the Paris Academy, of Medicine, September, 15, 1891 (2) he reported the results which he had obtained in twenty-three cases of pulmonary tuberculosis by means of subcutaneous injections of aristol, after having observed favorable effects from the remedy in scrofulous and tuberculous affections of the joints, and after having completely convinced himself of its harmlessness. He dissolved 1.0 gm. aristol in 100. gm. sterilized sweet almond oil, and injected daily a Pravaz's syringe of

this 1 per cent. solution, that is 0.01 gm. aristol. Seven patients treated in this manner were improved to such an extent, after twenty-five to thirty days' treatment, that they could be considered completely cured; in five other cases rapid, but only transient improvement occurred; in three the cavities remained unchanged, while two patients died during the treatment, the one of tuberculous peritonitis and the other of diphtheria. On the ground of his observations Nadaud presents the following conclusions:

1. That aristol employed subcutaneously is perfectly innocuous.
2. It is chiefly eliminated by the respiratory organs.
3. It exerts an antiseptic action and gradually improves the nutrition.
4. The effect of the remedy manifests itself very rapidly, often as early as the sixth or seventh day of treatment, by diminution of the cough and the night sweats.
5. After twenty to twenty-five days an increase of the bodily weight can already be demonstrated.
6. Aristol acts favorably only in the first and second stage of tuberculosis, while it is useless to employ it in cases of cavities.
7. Subcutaneous injections of aristol produce no inflammation of any kind at the place of injection, but give rise to considerable pains.

The second article on this subject was published by Dr. Ochs, who at the suggestion of Professor V. Jaksch tested the results reported by Nadaud, which had been confirmed by

(1) Eichhoff, *Mon. f. Prakt. Derm.* (1890, Nr. 2) & *Allg. med. Ctrl-Ztg.* (1893, p. 601, 613, 625.)

(2) *La semaine medicale.* 1891, Nr. 46.

Dr. da Silva at the meeting of the Paris Therapeutical Society, February 10, 1892. Like Nadaud, Ochs also employed a 1 per cent. solution of aristol in sweet almond oil (after filtration and heating to 100-120 degrees C. for a few hours.) The solutions were always preserved in a cold and dark place. This treatment was employed in six cases, comprising two men, 22 and 26 years old, and four women, respectively 24, 31, 35 and 40 years of age. All the patients presented dullness and crepitant rales at the apices of the lungs. The results obtained by Ochs are in no wise as favorable as those of Nadaud. His conclusions are as follows:

1. Aristol produces no improvement in pulmonary tuberculosis. A perceptible improvement in the condition of the lung was not secured in any of the six cases, although the number of tubercle bacilli in the sputum diminished.

2. It would seem that aristol increases the secretion of sweat.

3. By the application of aristol the cough and secretion of mucous is facilitated; the cough becomes easier, the sputum more mucous, if previously it has been viscid, and is often secreted in greater amounts.

4. The injections of aristol are painful, although they do not produce a strong reaction or prolonged increase of temperature.

5. Poisonous effects were not observed.

6. The results obtained were not sufficiently encouraging to warrant continuation of the experiments.

Finally, in Italy Dr. Berardinone has tried aristol in the form of subcutaneous injections. Encouraged by the report of Nadaud, he experimented with the remedy in the wards of

(3) *Prag. med. Woch.*, 1892, Nr. 36.

(4) *La Rif. med.*, 1893, p. 460 and 470.

Professor Paolucci in the Neapolitan Hospital, Gesu e Maria, on twelve women suffering from tuberculous trouble. He employed aristol in far larger quantities than Nadaud and Ochs (1.5 gm. in twenty-four hours), and injected a 15 per cent. solution in various places of the body. On the ground of his observations Berardinone reached almost the same

conclusions as Nadaud, which, in contrast to the experience of Ochs, are favorable to aristol. According to his investigations the remedy is useful in cases of pulmonary tuberculosis, which have not advanced too far, while it is inefficient where cavities are present. In mild cases the improvement is considerable and permanent; a reduction of the temperature, diminution of the frequency of the pulse and respiration, with relief of the cough and diminution of the expectoration take place; the night sweats disappear, there is a gain of bodily weight and increase of the number of red blood corpuscles and of the hemoglobin in the blood. Simultaneously a marked improvement in the local symptoms and a rapid decrease of the bacilli in the sputum is observed. The latter, as well as the disappearance of the night sweats, is noted even in severe cases. An increase of the temperature of the body after the injection was not observed, and after the employment of even large quantities of the remedy no symptoms of poisoning appeared. As regards constitutional effects aristol occasionally produces slight excitement with a feeling of heat in the body.

Aristol exerts no effect upon the urinary secretion. During the use of subcutaneous injections the urine contains iodine, but in very small quantity, in comparison to the proportion of iodine in the injected remedy. Among the unpleasant features of the treatment may be mentioned the marked pain caused by the injections and the resulting induration, which does not disappear until the lapse of a few days. Sometimes inflammatory processes arise in these indurated areas, which may produce a transient increase of the fever.

It will be seen therefore that two authors have declared in favor of the application of aristol in tuberculosis on the ground of experiments upon thirty-five patients, while one is opposed to the remedy on the ground of trials of six cases.

In view of the lack of therapeutic resources in tuberculosis, I decided to also institute experiments with aristol. The plan which I first conceived

was comprehensive. I intended to study the effect of subcutaneous aristol injections, not only on sick persons, but also to experiment on guinea pigs, and it was my intention in the case of the latter to employ aristol at various times after inoculation with tubercle bacilli. To my great regret the second, and, to me most interesting part of this work, was prevented by my duties, and I confined myself therefore simply to the clinical and therapeutical side of the question.

My observations were made in the male wards of the Marine Hospital of Kronstadt, on sailors during the period from December, 1893, to February, 1894. For the injections I made use of one to 15 per cent. solution of aristol, in sweet almond oil, according to the method of Berardione, at first in the pure state and in the second week with an addition of cocaine.

The injections were commenced along the back, from the supra-spinous fossa. As the patients received two or three such injections daily, it was difficult at the end of three or four weeks' treatment to find an intact place at which an injection could be made.

Almost all the patients, with the exception of four or five, complained of the severe pain attending the injections, which persisted from two to three hours. The majority experienced a sensation of burning which changed into a dull pain, rendering it impossible to lie on the back. In eight cases of very sensitive persons the painfulness was so considerable that the treatment had to be suspended in the first seven to ten days, at the urgent request of the patients. Objectively, after each injection, a marked swelling was noted, which was diminished by massage. The skin at the site of the injections was sometimes hot for two or three hours, but, thanks to asepsis, abscess formation never occurred. As was also observed by Ochs, the first injections produced elevations of temperature of 0.5 to 1.5 degrees, and a slight increase of the pulse frequency. Some of the patients complained of much

weakness, lost their appetite and experienced lancinating pains in the chest and marked cough, although the majority greatly exaggerated these unpleasant sensations. In the course of the treatment these symptoms usually disappeared, or, in other words, the patients became habituated to the injections.

Altogether thirty-three patients were treated with aristol, eight of which interrupted treatment on the tenth day, and are, therefore, not considered here. Thus there remain twenty-five patients ranging in age from 21 to 27 years, all with bacilli in the sputum, dullness at one or both apices; twenty-two with crepitant rales at the apices; four with commencing formation of cavities, and four with tuberculous pleuritis. In ten cases incipient tuberculosis of the larynx existed, and in one a chronic tuberculosis of the peritoneum.

All these patients were domiciled in two adjacent well-ventilated and light wards. The dietary was that customary at hospitals, with addition of milk, eggs, wine or brandy, according to the desire of the patient. In short, they received the same care as the other patients.

The treatment consisted exclusively of injections of 0.01 to 0.45 gm. aristol daily (a syringeful of a one per cent. solution to three syringefuls of a 15 per cent. solution). In addition to the aristol treatment no antipyretics or narcotics were given. The duration of treatment varied, according to the character of the case, the results obtained, and other circumstances, from fourteen to thirty days.

During the entire course of treatment the following conditions were noted: The bodily temperature (two to three times daily), the state of the lungs and the other organs, the quantity and appearance of the sputum, the cough, the sweats, the bowels, the sleep and the subjective state. Furthermore, bacilli in the sputum were counted every three to five days. Once a week the patients were weighed on an empty stomach, and after evacuation of feces and urine. In general, the patients were very capricious, and the treatment was ren-

dered especially difficult by the painfulness of the injections.

Now, as regards the result of this treatment, the bodily weight of twenty-five patients who had been subjected to it for from fourteen to thirty days was increased in seven cases and somewhat reduced in seven, in consequence of the continuous high temperature and the progress of the pulmonary lesions. In eleven cases neither an increase nor a reduction of the bodily weight was noted. The increase in weight varied from three to eight pounds. The tendency to a decrease of temperature was manifested only in the course of the first week. On comparing the temperature during the first week with that during the last an influence upon the fever in the sense of a reduction could be determined only in seven cases. Especially striking was the diminution of the cough in twenty of our cases. Anyone who is acquainted with the "coughing concerts" of the tuberculous, in spite of the administration of large doses of narcotics, would be astonished at the quietness in our hospital wards in which no narcotics were employed.

The sputum became less tenacious during the treatment, and could be more readily expectorated. The quantity was reduced in nine cases, in two almost completely arrested, and in two others somewhat increased. As regards the number of bacilli, a decrease was demonstrated in nine cases and a complete disappearance in four cases (as determined by ten successive examinations). These last four patients manifested considerable improvement in every respect, and three of them could be regarded as apparently cured. In fourteen cases a considerable diminution of the night sweats occurred, while in the remainder these were not perceptibly influenced. There were no material changes as regards the urinary and fecal evacuations. The local pulmonary phenomenon showed no special change in the majority of cases; on the contrary an advance of the process was noticed. In three of the above-mentioned cases, however, the signs present at the apices disappeared, the fine

moist rales subsiding entirely, while the areas of dullness became completely resonant. Four of our patients (two marines, twenty-one years old, of very weak bodily development and poor nutrition, and two sailors, aged twenty-one and twenty-three years respectively) died at an early period. All these four patients presented signs pointing to the presence of cavities already at the commencement of treatment, and the injections were undertaken at their own urgent request, although we entertained no hope of their success.

Among twenty-five patients, three were discharged completely cured, four died; while the remainder were slightly improved or remained unaffected by the treatment. At the same time I convinced myself that the subcutaneous Aristol injections had a favorable influence upon the cough, the sweats and the sputum in the majority of the cases. On the other hand, the application of the remedy was so painful that the treatment could in no wise be designated as agreeable. Although the pains can be alleviated by cocaine they cannot be completely arrested, since a dull pain remains for many hours, which may even disturb sleep of the patient and thereby act injuriously upon his subjective condition. I think that if the pains could be avoided the results of treatment would be much more favorable. Be this as it may, it would seem proper to study the influence of Aristol in tuberculosis, especially on intelligent patients, who, in the hope of improvement, would be ready to suffer any amount of pain.

On comparing my results with those of previous authors I am unable to coincide with Nadaud, Berardinone and Ochs. The first two have overestimated the value of Aristol, while Ochs is too pessimistic. I believe that truth lies here also in the middle. I have no doubt that, aside from the pains, which can be quite well tolerated, the Aristol injections are entirely harmless in the majority of tuberculous cases, although they exert but little influence upon the pulmonary process. On the

other hand, we have reason to hope—and this is supported by my last three cases—that in the case of some older patients Aristol may be of service, and that, therefore, further experiments, both on animals and human beings, are strongly indicated. In view of the great scarcity of remedies against so fearful an antagonist as tuberculosis we can unfortunately not be too discriminating. Our patients will not wait until we have found an absolute cure for all cases of tuberculosis, but demand immediate aid, and if we pass in review all our remedies against tuberculosis we will find very few that are serviceable, aside from a change of climate, which is available to but few patients.

**A PRACTICAL STUDY OF THE BLOOD AND THE CIRCULATION, WITH A HISTORICAL REVIEW OF THE SUBJECT AND ITS BRIEF CONSIDERATION FROM THE STANDPOINT OF ITS CHEMICAL COMPOSITION, ANATOMICAL STRUCTURE, AND PHYSIOLOGY; INCLUDING CLINICAL STUDIES, AND EXPERIMENTAL RESEARCH ON THE LOWER ANIMAL.**

BY THOMAS H. MANLEY, M. D.,  
NEW YORK.

Continued from last number.

**PART X.**

**ON THE ARTERIOLES OR PRIMARY CAPILLARIES AND CIRCULATION THROUGH THEM.**

When one beholds the living blood-current in motion under the microscope for the first time, the most bewildering multiplicity of phenomena come into view. The tremendous energy of movement in the arteries, the rush, swirl and almost infinite diversity of motions in the capillaries, and the slackening of current, as the corpuscles pass on, to enter the venous rootlets, from which they are moved into the vein, in vast, dark waves, like

columns of black smoke from a chimney, all combine to awaken a most lively interest. We will observe besides, in certain organs, very clearly defined, not only the vascular apparatus, but also the faintly marked lymph-channels, with their shadowy outlines, the medullated nerve terminals, pursuing a tortuous course with double contoured borders, Schwann's sheath, Ranvier's constructions, and the outlines of the axis-cylinder; besides among other things, mucous-crypts, the living, flat epithelia, in position with their distinct nuclei, their basis substance, and the stomata.

Altogether it is indeed a most marvelous revelation, a veritable panorama of nature, compared to which the nearest approach of imitation by art would have almost no comparison. After a patient study of the field we will observe certain definite characteristics in the various capillary districts; in the movement of the blood corpuscles and their color. We will note, too, that there are considerable areas which have no capillaries at all. We will observe in the webbing of the frog's foot that blood-corpuscles are carried to the base of the follicle, and swirl around it in a sort of cork-screw shaped vessel, but not a corpuscle penetrates into the ring of cuboidal epithelia, which it is composed of. It will be observed also that the capillaries dip under and cross over the nerve fibres, as these break up in their final ramifications, but none of them pierce the tubular terminals. We may witness this same feature in the spindles of smooth muscle fibre, and in the connective tissue elements, from all of which we must conclude that no blood vessels are in direct connection with the minute anatomical or histological elements of the body, and that their nutrition is entirely maintained by absorption and transudation.

The intercapillary spaces or meshes, however, vary widely in different organs and structures.

In the lung these are scarcely perceptible; in other situations they are about equal to the diameter of the

capillary. The largest interval between those vessels is in the tissue of the muscular coat of large arteries.

The vascularity of a part is determined by the relative diameter of those capillaries' meshes. In those organs in which the capillary walls are only separated from each other by little else than a structureless membrane, their vascularity is great. It may be well to bear in mind, as a practical fact, however, that the blood supply to a part is not always in strict proportion to the number of its vessels, but rather the capacity and arrangement of them; in other words, an organ may give issue to vast quantities of blood, that is quite devoid of capillaries; as in erectile tissue, like the corpora spongiosa, or the brain which contains an enormous quantity of blood, and yet is but scantily supplied with capillaries, and these are extremely minute.

In the primary capillary vessels or the arterioles, we will notice two features of striking interest. First, rhythm is lost, or but scarcely possible of detection; the corpuscles instead of being urged on by an intermittent impulse, are sent along in a steady rush. Now, in some of the finer arterioles we will observe secondly that they either break up into capillaries or are at once connected with the venous rootlets, thereby immediately sending the arterial blood unchanged into the venous system. This is best marked in the tongue and mesentery, but it may be seen also in the extremities. In this manner a considerable proportion of the blood is directly discharged into the afferent circulation, without making the circuit of the capillary-vessels. The corpuscular elements of the blood may be dimly outlined in these vessels, but these are yet indistinguishable. Along the track of these larger channels for a space of more than their own diameter, on either side, there are no capillaries. They apparently provide their own nutrition, probably by osmosis. Their walls are evidently extremely delicate, for when an animal is suddenly frightened and the peripheral circulation ceases they fade from view and become in-

visible. They are only delineated while the blood distends them. Although they are evidently provided with smooth muscle fibre, it does not appear that they ordinarily possess marked contractile power. They generally go on branching and breaking up, until they are finally lost in the systemic-capillaries.

As division and subdivision advances, the motion of their contained, corpuscular elements becomes less and less rapid—the sharp angles, curves, spirals and reverse curves soon offer such resistance as to quickly reduce the impetus of the torrent, to quiet streamlets, when we are in a position to study the capillary-terminals and their closed hematic elements with leisure and precision.

(To be Continued.)

#### THE RADICAL CURE OF ABDOMINAL HERNIA.

By Dr. E. Kummer (Revue Med. d. l. Suisse Romande).

The practicing physician of the present time is often called upon to give his opinion as to the possibility of cure in cases of hernia, and the sufferers from hernia, encouraged by the success attending the radical operation upon others, are in their turn desirous of obtaining the advantages which their companions in misfortune received from the operation.

The accident insurance companies and the legislators who need a knowledge of its curability to properly frame laws relative to the responsibility of employers and employed, are both interested in it. In our epoch of obligatory military service the State has a direct interest in the question since many conscripts who are physically sound in every other respect escape service on account of hernia.

However indispensable it may be for physicians to be well informed on this subject, yet it is practically possible for only a few of them to form, by numerous operations, a personal opinion as to the value of a radical cure, while the others can only form their ideas from a study of the literature of the subject, and this is enormous in amount. Now to the facts.

In the examination of recruits in

Switzerland from 1874 to 1884 there was an average of 0.0323 per cent. of ruptured, or annually 763 conscripts unfitted for service. Taking into consideration the fact that liability to hernia increases with age, it will be evident that the number of ruptured found in the recruits represents but a small proportion of the number in the entire population.

In the charity patients of the city of Paris P. Berger reckons 0.0277 per cent. are ruptured. In France, as a whole, this percentage, according to Molgaine, amounts to 0.05 per cent. of the entire population. Werner gives the same proportion for the population of the kingdom of Saxony.

As to the complications we will mention only the gravest: strangulated hernia. It is difficult to appreciate the risk run by a person suffering from rupture as regards this complication. No kind of hernia is free from the possibility of this accident, which may develop suddenly in all its gravity and with absolutely no precursory symptoms.

According to the figures in the Bureau central of Paris, P. Bergner found in 10,000 cases of hernia 246 of the strangulated variety or 0.0246 per cent., and he considers these figures as below the truth.

As to Switzerland, Dr. Zuillaume, director of the Federal Bureau of Statistics, gives the proportion of deaths certified to as from this cause as 0.026 to 0.034 per cent. in the decade 1884-93. The actual number of strangulations is evidently above this because, thanks to speedy surgical aid, the greater number of those attacked with strangulated hernia may be saved. In the clinic of Professor Socin, of Boston, alone, 12 out of 17 cases were cured by kelotomy.

The number of deaths, however, show better than any words the necessity for surgical interference before and not after strangulation makes its appearance.

Lucas Championniere (Paris, 1892, P. 578) has proved the existence of two other dangers menacing the ruptured: glycosuria and albuminuria, and without dwelling at length on them we need only mention the var-

ious abdominal troubles so often associated with hernia pains in the stomach, indigestion, constipation, diarrhea, vesical tenismus, functional troubles of the sexual organs, shooting pains in the back and legs, etc.

It would be an easy matter to prolong this list if necessary, but it seems sufficient to confirm the axiom that hernia requires a prompt and vigorous treatment. This treatment can only exceptionally be obtained by a hernial bandage (or truss). The treatment by bandaging seems to us, however, to be indicated in children up to the age of two years, for experience has shown us that a hernial bandage carefully adjusted and watched tends to cure the majority of infantile hernias. In adult age the case is altogether different; here the rupture is permanent and the truss is a daily torment.

What, then, is the situation of the ruptured person who wears a truss? To this question we can reply best by quoting the words of Mr. Lucas Championniere. There are hernias which protrude but little in persons making but slight muscular effort. For them the truss is a bandage or belt that they put on in the morning and take off on assuming the horizontal position in the evening; in short, it is a toilet article that they can conceal if necessary, that protects them and reminds them that certain muscular excesses are forbidden them.

These fortunate persons are by far the minority. Of the others, many suffer more or less constantly; the bandage holds the hernia badly. Must it be very powerful? then it is painful. Is it less firm, then it becomes useless or even dangerous for the hernia escapes. Such a person cannot take a low chair or go to the \*water closet, even with a well-fitting bandage, without the hernia escaping. The pressure of the hand must often be added to that of the bandage for every effort.

Such a person suffers constantly; ulcerations form on the skin, the ac-

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\*We must remember that the French watercloset is only a hole in the floor with a block on each side for the feet.

cumulations of epidermis smell bad and cause irritation.

This torment and martyrdom from the bandage lasts a life time.

What may now be said of persons afflicted with hernia that can never wholly be reduced, with which the individual never has the power of making a vigorous effort and who is always in danger of hernia strangulating?

In the ruptured patients of the last mentioned class, strangulation may be directly caused by wearing a spring truss; therefore it is absolutely necessary for them to have recourse to some other method of treatment.

(After a careful review of the pathogenesis of hernia our author continues).

In the table that follows of the results of the modern radical cures we have paid especial attention to two questions that seem to us to be of paramount importance, that of the mortality and that of the relapses. We shall commence with the latter.

Before proceeding further we must call to mind that every hernia coming in the place of the old one after a radical operation must not necessarily be considered as a relapse. The existence of a relapse only becomes evident in cases where the new hernia presents the essential characteristics of the old one. For instance, a patient who, after the operative cure of an oblique inguinal hernia becomes a sufferer from a direct inguinal hernia has no return of his old trouble, but a fresh hernia and in this case there should be no more question of a relapse than if he had a crural hernia or an inguinal hernia of the other side. To demand of the operative cure the definite obliteration of a hernia is no more than right, but it would be foolish to expect this operation to prevent the formation of other varieties, nevertheless the tables given by the best authorities have such incomplete descriptions as to often leave in doubt whether or no the hernia described as a relapse really was one.

(To be continued).

## The Times and Register.

Weekly Journal of Medicine and Surgery.

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PUBLISHED BY

**The Medical Publishing Co.,**  
No. 718 Betz Building, Philadelphia, Pa

Subscription Price, - - - \$1.00 Per Year.

Send money by bank check, postal, money or express order, payable to The Medical Publishing Co.

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367 Adams St., Dorchester, Boston, Mass.

All business communications should be addressed to  
**No. 718 Betz Building, Phila., Pa.**

Entered at the Philadelphia Post Office as second-class mail matter.

PHILADELPHIA, NOVEMBER 23, 1895.

### SPRAINS AND THEIR APPROPRIATE TREATMENT.

Primrose (Canadian Practitioner) holds that the aim of treatment for sprains is the early absorption of effused material and the prevention of adhesions. For the immediate treatment of a recent sprain pressure is of paramount importance. This should be applied as follows: The joint—say the ankle, for instance—is placed at a right angle (or, if possible, at less than a right angle) with the leg, then cotton-wool or ordinary cotton batting is applied evenly over the foot from the toes upward to the

middle of the leg. The amount of wool must be considerable, loosely applied; it should be fully three inches in depth. Over this is applied the bandage from the toes upward, which is drawn as tight as possible. There is no danger of making too much pressure, provided there is sufficient cotton-wool. This usually alleviates pain immediately by affording pressure to the blood vessels and keeping the part at rest. The bandage and wool are removed at the end of a few days, a week at the longest, and carefully instituted passive movement is employed; then the dressing is reapplied to prevent further effusion. In ten to fourteen days cotton-wool may be dispensed with and the support of an ordinary flannel roller substituted. The patient is able to use the injured joint for ordinary purposes after the lapse of about three weeks in the majority of severe sprains. In sprains of slight severity massage may be begun at once with excellent results, and in old sprains massage is by far the most appropriate treatment and indispensable in order to effect a cure. Heat and cold are at best temporary methods of relieving congestion, and do harm if employed too long.

#### TRYPTIC DIGESTION AND THE INTERNAL SECRETION OF THE SPLEEN.

A. Herzen (Rev. Gen. des Sciences, June 15, 1895) revives the theory as to the influence of the spleen on pancreatic digestion, which Schiff was the first to put forward in 1862. It has long been known that the digestive action of pancreatic juice on proteids is not continuous but intermittent, and that it appears regularly with the process of gastric digestion. Schiff showed that in animals from whom the spleen had been removed, neither the pancreatic juice nor an infusion of the pancreas had any digestive influence on proteids. Herzen has combined Schiff's views with Heidenhain's researches on zymogens. He finds that the volume

of the spleen at any moment varies directly as the amount of trypsin in the pancreatic juice, and inversely as the amount of zymogen. Thus the maximum quantity of zymogen is present during starvation, when the trypsin and splenic dilatation are at their minimum. Six or seven hours after food the conditions are exactly reversed. Furthermore, admixture of infusion of congested spleen greatly aids the pancreatic digestion of proteids. The blood of the splenic vein has a similar action, that from other vessels none. Herzen concludes that in the living pancreas the protrypsin is transformed into active trypsin by the influence of a substance produced in the spleen in quantity proportional to the intensity of its congestion. The substance finds its way to the duodenum through the general circulation.

#### HYMENODICTIONIN.

Coronedi (Gazz. degli Osped., July 27, 1895) has experimented on the toad with this alkaloid, which is derived from the bark of *hymenodyction excelsum*. Solutions of the drug—0.02 gr. in 100 c. cm. of nutritive fluid—exercise a marked effect on the heart. First, there is a short phase of irregular movements, and then a true diastolic arrest. The heart can easily be made to resume its natural movements by passing simple nutritive fluid through its cavities. Finally, however, the heart ceases to beat, generally in systole as regards the ventricles, while the auricles remain flaccid. During the phase of diastolic arrest the heart, especially in the auricles, is enormously distended, and may reach double its size. Vermicular movements observed at this phase in the ventricles. The author thinks the drug is a nerve poison rather than a muscle poison. There seems to be a certain analogy between its action and that of digitalis. Hymenodyctionin does not appear to be a very powerful drug, as its effects could easily be removed by passing simple solutions through the heart.

## Electro-Therapeutics.

IN CHARGE OF  
DR. S. H. MONELL, New York.

### FARADIC SEDATION IN ACUTE GLANDULAR INFLAMMATION.

Stimulation and muscular contraction is so generally associated with faradism (as this form of electricity is commonly applied) that its useful powers of sedation, when properly modified in tension and rate of interruption, are lost sight of by the great majority of physicians.

Those who are familiar with its sedative properties, and who possess apparatus designed to give out the essential current, employ it chiefly in gynecological practice, rather than upon the surface of the body.

A case of axillary adenitis was recently treated by the writer with prompt control of the pain and satisfactory progress of resolution under the influence of the rapidly interrupted high tension induction current obtained from my own improved apparatus.

So little has been written, however upon clinical experience in this direction that as editor of the electrotherapeutic department of "The Times and Register" I invite the special attention of readers to the exceedingly interesting and valuable report, which follows, I fully indorse the statements of the author, Dr. O. L. Williams, of Dallas, Texas, whose previous letter upon this subject was contained in the issue of October 26.

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In selecting the following case as a basis on which to formulate my method of treating this class of cases I do so because of its acknowledged intractability and widespread destruction of muscular and bony structures. Sloughing of the soft parts is common, and necrosis of the bony structures not infrequent. In addition to this the case was, indeed, a typical one, and continued to grow rapidly worse under the means ordinarily used to arrest it.

Miss E. L., age 16, a young lady of exceptional constitutional vigor and fine physique, in the third week of

typhoid fever developed a most violent inflammation of the left parotid gland from occlusion of the buccal duct. The temperature at once mounted up to 104 degrees, tongue dry and pain in the region of the gland so decided that hypodermics of morphine failed to give comfort, as the gland continued to secrete, with no outlet for the accumulating secretions. The tumefaction and swelling became more and more pronounced, until all the structures on that side of the neck, as far down as the clavicle, became involved; deglutition became difficult, and only liquid nourishment given with a spoon was possible. For three days, with anodyne embrocations, hop stupes and poultices, together with internal medication, embracing calomel, aconite and phenacetine, I endeavored to stay the inflammatory process, without avail. The inflamed zone began to show unmistakable evidences of blood stasis in a dusky, dark red color, accompanied by an unyielding temperature.

I at once apprised the family of the gravity of the case, and intimated a possibility of sloughing of the gland and contiguous parts, with a possible necrosis of the bony structures. I likewise stated that a resort to surgical means by laying open the gland and following it up with antiseptic irrigation and antiseptic dressings, would give the desired relief, but the young lady would have an unsightly facial blemish, which she begged me, if possible, to avert. My past experience with faradic electricity in inflammatory troubles encouraged me to offer the family a hope that with it I could arrest the inflammation, preserve the integrity of the gland, limit the destruction of tissue and avoid the much-dreaded facial blemish, if they would only patiently and perseveringly co-operate with me in the treatment. The mother, a lady of culture, responded with the declaration that, while a resident of Aberdeen, Miss., her family physician was a man of fine professional ability, and, as he had never mentioned electricity, she had little faith in it as a remedial agent. I humorously replied that whatever

her faith might be, the physiological effects of the electricity would in no wise be affected by it, and, as to her former physician being ignorant of its therapeutic value, this was not surprising, as there were thousands of others who stood in the same unfortunate relation to it. However, as I had in my favor the entire confidence of the family, they were not slow in giving their consent for me to proceed.

An electrode, well padded with absorbent cotton and large enough to cover well the entire inflamed surface, was at once applied and connected with the positive cord. The negative electrode, to avoid the multiple nerve plexuses that would necessarily have been brought into the circuit if applied on the head or spine, was applied to the feet. The primary short, heavy coil of a Tip Battery was used, and the electrodes kept constantly wet with a warm salt solution. A current barely perceptible to the patient was turned on, and the seances ordered one hour in every four. All other local treatment was suspended. After the first 24 hours the tension of the parts was lowered, the capillary circulation was improved, diverting the blood to other channels, the integrity of the blood channels in the inflamed area was slowly being restored, and extra-vascular pressure proportionately reduced. With the reduction of tension and extra-vascular pressure, and the arrest of transudation, the nerve filaments were being relieved of pressure and pain was proportionately lessened. The temperature record showed a slow but gradual decline from day to day (no antipyretics being used), but did not reach the normal point until the tenth or twelfth day. No opiates nor anodynes were given, the patient being encouraged to bear a moderate amount of discomfort, rather than incur the risk of locking up the secretions with opiates. After the tenth or twelfth day the fever and pain subsided, the tongue became moist, the appetite improved, my patient was comfortable and remained so to the end. Having now arrested the inflammatory process, after a most stubborn fight, I set to work to re-

move the inflammatory products. And in this connection I feel constrained to emphasize the great superiority of faradic electricity, at least in some forms of acute inflammation, over the therapeutic agents ordinarily used, because in it we possess a remedial agent that not only favorably modifies, limits and shortens the inflammatory process, but in the same physiological manner hastens resolution, removes the inflammatory products and promotes repair. That faradic electricity will do both has been demonstrated absolutely in my own personal experience, and my assumption in nowise does violence to the well-known physiological effects of the current. This dual action of faradic electricity is without a parallel in therapeutics, and will, when better understood, give to it a prominence and range of application supremely above the host of agents that have from time immemorial been plied to extinguish inflammatory trouble. Indeed, I assert without fear of successful contradiction, that there is not one single agent in the entire therapeutic list with physiological effects so clearly drawn and better adapted to arrest inflammatory processes than is faradic electricity.

My recent preceptor in gynecology, Professor Byron Robinson, of the Post-Graduate Medical School of Chicago (and should he chance to read his name in connection with electricity, I in advance ask his pardon, because of his inveterate hatred for electricity), with all the emphasis a man of his fixed convictions could enunciate, repeatedly stated to the class of physicians of this year that in all conditions of blood stasis the sheet anchor, the great weapon of defense, the power behind the throne, was the weapon that kept the blood current in motion. The blood must not linger nor tarry in the blood channels, but must be induced to move on, and he referred to the benign effects of poultices in pneumonia, and of hot douches in metritis by way of illustration; in pneumonia, to induce the blood to flow on, and to contract pulmonary vessels; in metritis, to induce stagnant blood to flow more rapidly, and secondarily to

permanently contract vessels. That great pathologist, Senn, has truthfully declared in terms not to be misunderstood that the "great desideratum never to be lost sight of in inflammation is to preserve intact the blood channels; that whatever impairs the vis a tergo of the circulation proportionately augments the inflammatory process. That the coal tar products so popular at present are hurtful antipyretics in inflammatory fever, because a reduction of temperature is secured by directly lessening the heart's action."

It must be admitted, as a general axiom, that congestion not only precedes, but predisposes to inflammation by lessening the resistance of the tissues. And for local infection there must be at least three factors, viz., microbes having active pyrogenic power, a medium favorable for their development, and a loss of tissue resistance; to these might be added the condition of the local circulation and vitiated or perverted secretions.

A proper conception of these several factors demonstrates unquestionably that in congestion, as well as inflammation, the only scientific rational method of arresting either is to keep open the blood channels, thus preventing the aggregation of the leucocytes and stagnation in the blood streams. Whatever will do this will proportionately lessen exudation, transudation and extravascular pressure; prevent tension and limit pain. Not only so, but whatever modifies or lessens these inflammatory factors must necessarily limit the inflammatory products, and we have fewer to remove after the arrest of the inflammation. Faradic electricity, through its mechanical action is the only agent that meets all these indications.

It is likewise no great presumption to assume that it is no less potential in the treatment of infected wounds—and why? Because in the first place its benign effect on the circulation keeps in contact with the infected area the highly vitalized blood. This reinforces the adjacent tissues and increases their power of resistance. In the second place, by

keeping open the blood channels distension of the capillary vessels, with subsequent rupture of their walls, is in large degree prevented, and inasmuch as the leucocytes are recognized as carriers of infection and are found in the products of transudation and exudation that always pour out through these breaches of continuity, the importance of preventing these vessels from rupture cannot be overestimated. Overdistension is in some degree also prevented by the pronounced effect faradic electricity has in maintaining a healthy collateral circulation, and in constricting the arterioles. But I must hasten on after justifying this digression on the score of endeavoring to explain how faradic electricity can discuss inflammation from a physiological standpoint.

In the case reported, whose history I followed to the tenth or twelfth day, would say, after the arrest of the inflammation there was still considerable swelling and engorgement, and the applications were continued for fifteen days longer, to remove the inflammatory products, with perfect restitution at the expiration of that time.

The latter part of the treatment was made with a more stimulating current from the secondary induction coil, and the current never used strong enough to produce pain. The seances were (as they should always be) shortened to thirty minutes, and only used two or three times a day. Currents of high tension must not be used more than fifteen or twenty minutes or bad results will follow.

The recovery was perfect, there has been no recurrence, and the young lady is here to testify to the truthfulness of my statements. The mother, who at first evinced so little faith in electricity, said to me, when I discharged the case, that if she ever got sick she wanted me to treat her, and it mattered not what her sickness was, she wanted me to treat her with electricity. Lastly, I wish to say that, while I visited the case thrice daily for the first ten or twelve days, and every other day the last fifteen, the applications were made by the young lady herself, and on

many occasions, when using the battery, the effect was so soothing she continued the seances two, three and four hours. In conclusion I could mention other cases, but, as the applications were alike in all, I see nothing to be gained by giving their histories. He who would call in question what I have recorded in this case would not be convinced with the history of a dozen cases.

TRANSLATIONS FROM

## Foreign Exchanges

BY DRs. CHANDLER AND DAVIDOW.

### THE QUESTION OF STITCH ABSCESSSES.

Lauenstein (Beilage zum Cent. fur Chir., 1895, No. 27) discussed before the German Surgical Congress the cause of the stitch abscesses observed in patients after aseptic operations. He made 216 observations on different suture and ligature materials in regard to their bacteriological relations. Among these bacteria capable of development in so-called sterilized catgut were found 35 times. In 149 samples, 107 were sterilized by dry heat; but 29 were afterward found to contain bacteria capable of development. The bacillus subtilis occurred most frequently, although the micrococcus tetragenus and staphylococcus albus were also found.

The author summarizes his observations as follows:

1. Clinical observation shows that there are cases of wound infection which have their origin in the catgut used in the operation.

2. It cannot be definitely settled in any case that the catgut was the source of infection.

3. But it can be said that the so-called sterilized catgut sold in shops contains bacteria capable of development and growth.

4. So long as this catgut is found to contain bacteria it cannot be free from the suspicion of being the source of infection in wounds.

In the discussion that followed, Kocher, of Bern, said that since 1888 he has employed silk only, and that

in his goitre operations before that time he had only 35 per cent. of absolutely primary healings, while since then he has had 85 per cent. Kocher believes that the suture material should be not only aseptic, but also antiseptic.

The past winter he has placed his silk in a watery solution of arsenious acid, and as a result in 35 cases has had absolutely primary union.

### FATAL ECLAMPSIA—PARAMETRIC STRICTURE OF ONE URETER.

Favre (Virchow's Section, Vol. cxli, Part 2, August, 1895) publishes an important clinical note. A woman, aged 24, eight months pregnant, was taken on February 3 with headache, vomiting and pelvic pain. A faint trace of albumen was found in the urine. Digitalis and ipecacuanha were given. After temporary improvement she was seized in the evening of the sixth with a series of violent convulsions. The temperature rose to 101 degrees after one fit, but a few hours later, after another fit, it was as low as 94 degrees. Urine was scanty, and highly albuminous. Milk, digitalis, and large doses of chloral were given, and the patient was bled. Twenty-four hours after the fits began the temperature was 102 degrees. Three hours later the patient died. Favre points out that many obstetricians maintain that rise of temperature in a pregnant woman attacked with fits is pathognomonic of true eclampsia gradivarum, fall of temperature signifying uremia. At the post-mortem examination the left ureter was found pervious and otherwise normal. The right was widely dilated from the kidney to the brim of the pelvis. Below it seemed to run into the uterus. On careful dissection it was found to be completely obstructed by parametric deposit, which was firmly pressed upon by the pregnant uterus. The placenta contained white infarcts; the fetus was relatively small. The right renal pelvis was hydronephrotic. The substance of the gland was markedly variegated, the cortex being bright red, the medulla deep blue. The capsule was

easily separable. The left kidney was also inflamed, but the inflammatory process was uniform on its glandular substance. The liver was fatty, with numerous hemorrhagic foci.

#### BORAX AS AN AID TO THE DIGESTION OF MILK.

M. Germaine See announces the clinical fact that borax used internally is a valuable aid to the digestion of milk. He discards the use of carminatives, charcoal and other intestinal antiseptics, claiming that they injure the mucous membrane of the intestines. He employs laxatives—hydrastis canadensis, castor oil and olive oil—in large doses, or oil enemata. Professor See holds that in many cases of indigestion the stomach is erroneously treated, when the real cause of the disease is the intestines, which are often the seat of membranous enteritis resulting from constipation, and giving rise to glairy, mucilaginous, cylindrical masses of mucus, with pain and swelling over the region of the colon. These symptoms easily distinguished the cases referred to from ordinary constipation, in which there may be easily seen masses of filamentous or vermicelli-like mucus.—Med. and Surg. Reporter.

#### SUTURE OF THE VAS DEFERENS.

Parlavecchio (Gass. degli Osped., August 31, 1895) in operating for a right strangulated hernia, had the misfortune accidentally to lacerate the vas deferens. To remedy this the author thereupon cut the two ends of the vas obliquely, so as to form a larger surface, and sutured them together with four Lembert sutures of fine silk. Torsion of the vas was carefully avoided, the stitches held well, and beyond the application of a scrotal suspender no special modifications in the ordinary post-operative treatment were adopted. The wound healed by first intention. The patient came to report himself two years after. The hernia was then quite cured; there was no swelling, no cyst of the vas deferens, no diminution of sexual desire, no

atrophy of the testicle, no loss of sexual vigor, and no disturbance of micturition or defecation. The author was unable to examine the state of the prostate per anum, but there were no symptoms pointing to any alteration in that organ.

#### SUBCUTANEOUS EMPHYSEMA AFTER INTUBATION.

Bauer (La Pediatr., No. 7, July, 1895) reports two cases of diphtheria in children where after intubation subcutaneous emphysema occurred. In the first case, that of a child aged 4, suffering from mild nasopharyngeal diphtheria, as difficulty of respiration came on, intubation was performed. Violent coughing occurred, and the tube was expelled, but was replaced. The day after emphysema of the neck and upper abdomen occurred, and rapidly spread to the back. The tube was removed, the emphysema remained unaltered at first, but ultimately entirely disappeared, and the child left the hospital cured. The second case was very similar. The tube was kept in two days, and finally removed on account of emphysema, which lasted in this case five or six days, but finally disappeared. The author supposes the emphysema was due to alveolar rupture induced by the violence of the inspiration, and that the tube simply acted as a "determining factor." In 800 cases of intubation Bauer has only observed these two cases of emphysema.

#### SUBCUTANEOUS CAMPHOR INJECTIONS.

Schilling (Munch. med. Woch., September 17, 1895) refers to the means of overcoming collapse by ether, musk and camphor administered subcutaneously. Ether has a markedly evanescent effect. The tincture of musk, although a valuable cardiac stimulant, is not constant in its composition. Hence camphor is very generally employed. The author maintains, however, that the doses of camphor used are not large enough. He says that as much as 1 gr. of camphor may be employed. The effect of 0.5 gr. on a thready and almost imperceptible pulse is well

marked, but that of 1 gr. is often astonishing. The solution of camphor used is camphor 1, olive oil 10. He gives one ordinary syringeful to children, seldom three, and mostly five to ten to adults. These large doses of camphor are well borne. No ill effects on the skin, brain or lungs have occurred. Fear of fat embolism should scarcely exist, since hardly a case of the kind has been put on record. The author then refers to the small doses recommended in the recognized textbooks. Probably large doses of camphor act differently in animals than in man. Even in cases with cerebral symptoms the author has used these large doses without any increase in those symptoms. Camphor leaves the body within a couple of hours, and has no cumulative action.

## Surgery.

IN CHARGE OF

DR. T. H. MANLEY, New York.

### THE USE OF VINEGAR FOR THE ARREST OF VOMITING AFTER THE ADMINISTRATION OF CHLOROFORM.

Lewin (Rev. de Chir., September, 1895) has obtained very good results with regard to the prevention of sickness after the administration of chloroform by immediately replacing the inhaler by a linen cloth steeped in vinegar, and allowing this to remain over the patient's face for at least three hours after the completion of the operation.

### HYDATID CYST OF THE OVARY.

M. Demous has reported a case of hydatid cyst of the ovary. This, he says, is very rare and difficult of diagnosis. He reports a case in a young woman who after marriage discovered a swelling in her right side. This remained stationary, and did not increase in volume until her third confinement, when its size seriously interfered with delivery. The forceps had to be employed and the infant survived but a few moments.

Some time after this she came un-

der Demous' care for operation of what was supposed to be an intra-ligamentous fibroid.

On operation it was established that the side was as suspected, but the mass was found to consist entirely of echinococci. It was found necessary to tap the tumor three times before definite cure succeeded. He mentions that it is very unusual to meet with these parasitic growths, isolated; and that they are more commonly scattered and diffused among the meshes of the peritoneum.—Le Mercredi Med., Oct. 2, '95.

### CONGENITAL DISLOCATION OF THE HIP AND ITS TREATMENT.

BY LANNEBOUGUE.

(Congres D'Obstetrique Gynecologie Et Peditry, Tenu a Bordeaux, 8 a 14, Oct., '95.

At this important meeting there was a prolonged discussion on Lannebougues' essay on congenital displacements, luxations and subluxations of the hip-joint. The author believed that the pathology of this condition was extremely complex; sometimes depending on articular malformation, a non-development of the cotyloid-cavity, an absence of the ligamentous stays, or what was most frequent, a muscular atrophy and degeneration, allowing of a falling outward of the head of the femur. In some there is an arrest of growth in the epiphysis, with irregular cartilage formation.

In some of these cases there are coincident defects of development, all the way down the limb; the femoral curve is absent or exaggerated, and we will often find luxation of the patella.

Cachexia, or strumor syphilis, or rickets does not seem to act as a causative factor.—Le Mercredi Medical, Oct. 25, '95.

Broca believes that the dislocation is a real congenital defect of intra-uterine development; and, contrary to the opinion of Verneuil, that it is not paralytic. Reduction is often out, of the question, because of the

want of a cotyloid cavity to hold the femoral head in place after reduction, and besides, muscular inertia to support it. In many, in order to relieve the patient of the rigidity of the joint deformity and great lameness with lordosis, it becomes necessary to excise the head of the bone. This is best accomplished through Lorenz incision anteriorly, by which operation is rendered easier, and accuracy of operative manipulations is practicable.

Some have undertaken to gouge out a cavity for reception of the femoral head, and a few have succeeded in this manner, fixing the joint the ankylosis has followed with little if any improvement in the joint action.

#### MULTIPLE WOUNDS OF THE INTESTINE AND THE GRAVIDE UTERUS, BY A BALL FIRED FROM A REVOLVER. PROLAPSE OF THE UMBILICAL CORD, THROUGH WOUNDED UTERUS. LAPAROTOMY RECOVERY.

BY DR. ALBERRAN.

(Reported By Pozzi.)

Late in the evening of October 2 a young woman, 19 years old, was admitted into Cochen Hospital, Paris, into M. Quene's service. She was four and a half months pregnant, and had shot herself just below the navel. After the weapon was fired she fell, but soon recovered consciousness. Vomiting soon set in, but the materials contained no blood. But she was in great shock. Many injections of ether and caffeine were made, and one injection of 400 grammes of artificial serum were administered. The wound was covered with gauze and the abdomen enveloped in iced cloths. Alberran found her on his arrival in a semi-comatose condition. The face was pale and the body covered with cold perspiration. The abdomen was somewhat ballooned, and on a line about five inches to the right of the umbilicus the opening made by the ball could be seen.

Immediately preparations were made for a laparotomy.

At 11 P. M., five hours after the accident, the abdomen was opened. A long incision was made, extending from the umbilicus to the pubic union.

On opening the peritoneum a large discharge of serum escaped. Now the entire intestine was eviscerated, it being well protected by warm towels.

Blood issued freely from every direction, so that it was necessary to employ sponge packing to control it. About ten inches of the small intestine was found so riddled by the bullet that it had to be resected. An end to end anastomosis was made, using silk as a suture; first sewing together the mucous surface, the mucomucous suture, and then the seroserous suture of Lambert was employed. Farther on the fifth opening into the bowel was discovered. This was sutured. Now the source of the hemorrhage was sought for, when several lacerations of the mesentery were found and closed. The patient was then placed in the Trendelenburg position, as then we find deep-seated concealed bleeding. At this juncture the prolapsed umbilical cord came into view through an opening in the wall of the uterus. This was seized, well drawn out and cut off. When this was returned the wound was clearly sutured. The intestines were then replaced and the abdominal wall sustained, leaving only an opening at lower angle for the end of the gauge wicking, which was packed into Douglas' pouch.

The operation lasted one hour and twenty-five minutes. She aborted the same night, but finally made an excellent recovery.—*Bulletine Et Memoires, Soc. De Chirurgie, Mai et Juin, '95.*

#### CAUSE OF EARLY DEATH AFTER OPERATIONS ON THE INTERNAL ORGANS.

Thiercelin and Jayle describe the necropsies made on seven cases of abdominal section (five removals of appendages, one ovarian cyst, one adominal hysterectomy) which had

died, six within three days and one within six days after the operation. In five, including the case which lived six days, there was distinct acute fatty degeneration of the liver. In the remaining two, where the lesion could not be detected by the naked eye, cloudy swelling of the hepatic cells was discovered on microscopical examination. It is expressly indicated that in none of the seven cases did suppurative peritonitis exist. Thorechin and Jayle then examined the liver from a case of death from hemorrhage six hours after operation for a ruptured extra-uterine fetal cyst. The liver was absolutely free from fatty changes. But in the liver of a child that died a week after an operation for congenital dislocation of the hip acute fatty changes were discovered. The same condition was seen in the liver of a man dead from septicemia due to phlegmonous inflammation of the larynx. Other evidence is infected by streptococci. Cirrhosis, etc., predispose greatly to this infection after laparotomy.—Annals Ardmus of Gy., Gaillard's Med. Jour.

#### CORK SPLINTS FOR DEFLECTIONS OF THE NASAL SEPTUM.

Dr. Berens reports excellent results from the use of a simple device for a splint in cases of fracture or operation for deflected septum nasi. Plugs of cotton or oakum become too readily foul, while the various supports which have been used have many disadvantages, the soft-rubber tubing being too yielding, while the hard rubber or ivory plugs cause too much pressure and pain. Berens makes his splints from corks in the following manner: A selected cork (pint-bottle size), in average length one and a sixteenth to one eighth of an inch, at its narrow end one-quarter of an inch less, is whittled to the shape of an almond with the point cut off, and flattened on the side that is to lie against the septum; the opposite side near its lower border is slightly grooved for the reception of the inferior turbinated body. A na-

sal burr or trephine is now used to hollow the splint, leaving the shell one and a sixteenth to one-eighth of an inch thick. A rat-tail file, a small-bladed knife or red-hot metal may also be used for this purpose. Sand-paper is used to smooth both the inner and outer surfaces, and the whole splint is then coated with flexible collodion, to which has been added iodoform in the proportion of thirty grains to the fluid ounce, allowed to dry and it is ready for use. The making of the splints requires no especial mechanical skill, and they can be modified with ease to suit the peculiarities of each case. The special advantages of these splints, which are possessed by no other similar device, are the quickness and ease with which they can be made and shaped to fit the peculiarities of each case; their cheapness, lightness, and elasticity combined with sufficient firmness to support the septum; their durability and non-conduction of heat and cold and non-interference with the free circulation of the blood; the ease with which they can be cleaned in situ by washing out with peroxide of hydrogen and boric-acid solutions, followed by an oily spray, as benzoinol, and the length of time they can be worn without pain, discomfort or severe ulceration.—Boston Medical and Surgical Journal.

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### Medicine.

IN CHARGE OF  
DR. E. W. BING, Chester, Pa.

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#### MENTAL SYMPTOMS OCCURRING IN BODILY DISEASE.

Reynolds (British Medical Journal, September 28, 1895). Mental symptoms occurring in bodily disease may be divided into those slight mental changes in the feelings and emotions not amounting to actual certifiable insanity, and actual insanity. The slight mental states may be roughly subdivided into pleasurable feelings, depressed feelings, conditions of mental dullness, abnormal irritability of temper and feelings of terror. His conclusions:

1. It is a comparatively rare oc-

currence for actual insanity to develop during the course of bodily disease.

2. In general hospitals mental disease most commonly occurs after fevers, poisons, injuries, operations and heart disease (in about this order of frequency).

3. In the early stages of fevers and after injuries and operations, mania is the commonest form of insanity, but in other conditions depression is more common; but the commonest form is an insanity with marked delusions of persecution (often associated with hallucinations of hearing), such as one sees in phthisis and heart disease, and after typhoid fever.

4. There is no form of insanity connected with special bodily disease, so that it is impossible to diagnose the bodily disease from the mental symptoms present (except the peculiar state of alcoholic paralysis).

5. Insanity occurs with unusual frequency in bodily disease associated with peripheral neuritis, as poisoning by alcohol, carbon bisulphide and lead; pellagra, typhoid, typhus, scarlet and rheumatic fevers, influenza, pneumonia, phthisis, syphilis, septicemia, rheumatism, gout and diabetes. It is possible that in these conditions the factor which causes the changes in the peripheral nerves causes also similar changes in the multitudinous internuncial fibres in the brain and so produces disturbances in the normal cerebral reactions which go to make up a healthy mind?

6. When the cause is not continuous—such as the poisons, the fevers and the traumata—the mental symptoms in the great majority of cases disappear; in heart disease and phthisis they may disappear and reappear from time to time, but in some cases, such as insanity connected with gouty kidney, they only disappear with death.

#### THE QUICK FILTRATION OF URINE.

For a very long time, says a writer in the Boston Medical and Surgical

Journal, it has been a problem to know how, with the apparatus usually at hand, to obtain quickly and easily a small quantity of clear urine from a cloudy specimen in order to make the usual test for albumen.

The following plan, which has proved extremely easy and satisfactory in my own case, will, I think, be found equally so in the hands of others. A small quantity of the cloudy urine is placed in a test tube, and the mouth of the tube plugged with cotton to a moderate degree of firmness. A second test tube is placed with its mouth to the first. The position of the tubes is now reversed so that the one with the urine is bottom upward. The upper tube is now carefully and gently heated over the flame of a Bunsen burner or an alcohol flame, and the expansion of the air above the urine immediately forces it through the cotton plug, and the filtered urine collects in the lower tube. In this way we imitate to a degree the rapid filtering apparatus of laboratories, but use pressure above the fluid to be filtered, instead of an air-exhaust below.

#### AMMONOL.

This new drug is a combination of phenylacetamide (acetanilid or anti-febrin) with carbonate of ammonia, and it is claimed for it that the tendency to depression produced by coal tar products is thereby obviated. Five to twenty grains may be given as a dose, but it has not been found necessary to give more than a drachm in the twenty-four hours. It may be used with pulv. ipecac. co. for aborting a threatened cold, or as an expectorant mixture, with caffeine in migraine, and for the after-effects of narcotics and alcoholic stimulants. It is indicated in fevers, catarrh of influenza, neuralgias, gastralgia, atonic dyspepsia, pneumonia, bronchitis, rheumatism, dysmenorrhea, uterine and intestinal colic, and catarrh of the bile ducts. It occurs in amorphous crystals having a pale yellowish color, is strongly alkaline in reaction, and has an ammoniacal taste and odor.—London Med. Times.

## Miscellany

—Dr. Welch, the bacteriologist for Johns Hopkins Hospital, has demonstrated that germs will not grow in the immediate vicinity of silver. His discovery is made use of in the dressing of aseptic surgical wounds, by placing silver foil immediately in contact with the closed incision in sheets about four inches square. The other aseptic dressings are then applied.

—William Lester, a Philadelphia editor, can write with both hands at the same time, and, more than that, can write in this way two entirely different paragraphs on entirely different subjects.

—Says the *Journal de Medicine de Paris*: "We have serious reasons for believing that adhesion to exclusive bacillary pathology does not obtain better results than clinical medicine in the great majority of cases, and, moreover, compromises the constitutions of our patients."—N. Y. Med. Times.

—The Archives of Pediatrics will hereafter be published under the management of E. B. Treat, the medical book publisher. The editorial management will be in the hands of Floyd M. Crandall, M. D., Adjunct Professor of Pediatrics, New York Polyclinic. The journal will be enlarged, with additional collaborators in its different departments.

—Rosenbury advises before administering chloroform spraying the nose with cocaine solution. By this means the reflex action of the heart is prevented and anesthesia more readily produced.

—Balfour says all weak hearts should have their principal meal in the middle of the day, and with as little fluid as possible.

### ACETANALID.

Dr. Morton finds this remedy a specific in simple chancroids, the sore healing in from one to seven days. The sore is to be washed several times a day, and dusted with the powder.

## MEDICAL EXCURSION TO BERMUDA.

Dr. J. B. Mattison, of Brooklyn, is arranging another excursion of doctors to Bermuda, sailing on December 12 and returning January 2 or 13. Specially low cost for a delightful winter outing. Details on request.

From the *Rivista d'Igiene e Sanita Publica*, a newsy little Roman medical journal, we cull the following:

Notice—The subscribers to the *Rivista d'Igiene e Sanita Publica*, who have not yet paid their subscription for the year 1895, are incessantly urged to settle with the publisher, so as not to have the paper stopped and their respectable names published in the *Rivista* among the delinquents.

L'Amministrazione.

If American publishers should try this wouldn't there be a circus?

A lady from the far West, who had just been through a course of typhoid treatment with enemato en masse said while speaking of her experience: "I don't know much about different kinds of doctoring, but I must say I prefer quartz to placer mining."

In regard to the immunizing effects during the epidemics of diphtheria in institutions, some very interesting papers have been read before the "American Pediatric Society," at its seventh annual meeting at the Virginia Hot Springs, May 27, 1895, by Dr. L. Emmett Holt and Dr. A. Seibert, of New York, and Dr. F. Gordon Morrill, of Boston.

These well-known specialists of children's diseases showed in their reports, which were published in the "*Archives of Pediatrics*," July, 1895, that injections of antitoxin for im-

munizing purposes are of inestimable value. Dr. Morrill described the results obtained from 438 immunizing injections of antitoxin at the Children's Hospital in Boston, of which 109 were of Gibier's serum; 104 of Behring's; 74 of Aronson's, and 151 of the antitoxin prepared by the Massachusetts State Board of Health. As regards the urticaria, its frequency, severity, time of appearance, and duration varied greatly with the brand of serum employed. That of Gibier (Pasteur Institute, of New York) produced it in 22 per cent. of the cases on the (average) seventh day, and lasting (average) two and a half days. Behring's caused it in but one case, appearing on the eighth day and lasting three days. Aronson's gave rise to no urticaria. The serum of the Massachusetts State Board of Health produced in about 41.2 per cent. of the cases, an eruption appearing on the (average) second day, and disappearing in a day and a half.

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## Wayside Notes.

By ERNEST B. SANGREE, A. M., M. D.

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One who has a weakness for autopsies finds good cause for envy in witnessing the Germans at this somewhat disagreeable branch of medical science. At our city hospitals and colleges the getting of a "post" is something of an event, while even at Blockley occasionally days will elapse before anyone has succeeded in wheedling the friends or relatives into allowing a section to be made on one of the city's pauper dead. It is often very hard even to secure permission to make an autopsy on the body of the friendless dead, whose remains will soon grace the dissecting table or the potter's field. And when the autopsy is finally made, it must be done with such delicacy that the body will look better, if possible, after the operation than before. In other words not the slightest mutilation is permitted, or the pathologist's official head would drop into a figurative basket. How is it in Deutschland?

While I was in Berlin this summer we had at the city hospital, corresponding with Blockley, from three to ten autopsies every day. From what I could gather, the pathologist has free sway over the inmates of the dead house, and few get away without leaving a complete set of internal organs for demonstration to the students. Here many hours must elapse before an autopsy dare be made; there I saw warm bodies on the table at 10 o'clock that had died at 6 or 8 that morning. In some cases I asked: "Had this person any friends?" The answer would be "we do not know." But the section would go on.

Every person that dies inside the hospital grounds comes under the pathologist's knife. Here cases of suspicious death, suicide and its like go to the Coroner's physician, who usually has neither the time nor the ability to apply himself to the scientific side of the question. Over there the pathologist makes all such autopsies and greatly enriches his museum thereby. I have no hesitation in saying that one can see in Berlin in one month more of pathological interest than can be seen in one year in any city in the United States.

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## Books Received.

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PERSONAL SERVICE AS THE ESPECIAL EXPONENT OF A GREAT PROFESSION. By Henry O. Marcy.

THE SURGICAL TECHNIQUE OF ASEPTIC WOUNDS. By Henry O. Marcy.

SANITATION in STREET PAVEMENT. By Henry O. Marcy.

CLINICAL NOTES ON PSORIASIS, WITH ESPECIAL REFERENCE TO ITS PROGNOSIS AND TREATMENT. By L. Duncan Buckley, A. M., M. D. Reprinted from the Transactions of the Medical Society of the State of New York, 1895.